

WHAT IS CLAIMED IS:

1. A method for managing volumes of a plurality of storage systems, by a management computer connected via a network to the plurality of storage systems having volumes connected to a computer via a network and storing data used by the computer, the method comprising the steps of:

keeping a correspondence between a level indicating a specific performance of a volume, and storage system characteristics of the storage system;

obtaining from a first storage system a level indicating a performance of a volume allocated to the computer by the first storage system; and

referencing the storage system characteristics of the first storage system that corresponds to the obtained level indicating the performance of the volume and storage system characteristics of another storage system, respectively, and comparing the performances of the volumes of the respective storage systems against each other.

2. The volume management method according to claim 1, wherein the correspondence is obtained from the storage system connected to the computer.

3. The volume management method according to claim 1, wherein

the comparison of the performances of the respective volumes in the respective storage systems is performed when the correspondence is obtained from a new storage system that has been connected to the management computer via the network.

4. The volume management method according to claim 2, wherein the comparison of the performances of the respective volumes is also performed when a new correspondence is obtained from the storage system.

5. The volume management method according to claim 1, wherein the level is an integer value from 0 to 10.

6. The volume management method according to claim 1, further comprising the step of instructing the other storage subsystem, based on the results of the comparison, to allocate to the computer a volume having storage system characteristics of the other storage system corresponding to the obtained level.

7. The volume management method according to claim 6, wherein the management computer receives an input giving an instruction to allocate to the computer the volume having storage system characteristics of the other storage system corresponding to the obtained level, and instructs the allocation.

8. The volume management method according to claim 1, wherein the comparison of the respective levels indicating the specific performance is not performed in a case where the level indicating the specific performance of the volume indicates that the specific performance is not needed.

9. The volume management method according to claim 6, further comprising the steps of:

copying data stored in a volume of the first storage system into a volume allocated to the computer based on the instructions; and

giving instructions to the computer via a management network to execute, via a data network, at least one of: reading the data copied by the computer into the allocated volume, and writing new data.

10. The volume management method according to claim 1, wherein, in a case where there are a plurality of specific performances, the comparison is performed using the highest level of performance.

11. A method for managing volume of a first storage system connected to a computer via a network, and volume of a second storage system connected to the first storage system, by a management computer

connected to the first storage system and the second storage system via a network, the method comprising the steps of:

keeping a correspondence between a level indicating a specific performance of a volume and storage system characteristics indicating a performance of the storage system, for each of the storage systems;

obtaining a level indicating a specific performance of a volume of the first storage system, and a level indicating a specific performance of a volume of the second storage system connected to the volume of the first storage system;

comparing the storage system characteristics corresponding to the obtained level; and

storing data stored in the volume of the second storage system into the volume of the first storage system, based on the results of the comparison.

12. The volume management method according to claim 11, wherein the comparison of the storage system characteristics is performed by obtaining mapping information indicating that the volume of the first storage system is connected to the volume of the second storage system, based on the mapping information.

13. The volume management method according to claim 12, wherein the mapping information is obtained from the first storage system.

14. The volume management method according to claim 12, further comprising the step of, when the results of the comparison indicate that the storage system characteristics of the first storage system corresponding to the level indicating the specific performance of the volume of the second storage system is better than the storage system characteristics of the second storage system, the data is stored into the volume having a specific performance, based on the storage system characteristics of the first storage system corresponding to the level of the first storage system.

15. The volume management method according to claim 14, further comprising the step of instructing the first storage system to erase the mapping information.

16. A first storage system connected to a computer via a network, comprising:

a volume connected to a volume of another storage system storing data used by a computer;

a memory for keeping a correspondence between a level indicating a specific performance of the volume, and storage system characteristics of the storage system, for each of the storage systems; and

a control unit for controlling access made to the first storage

system or the other storage system from the computer,

wherein the control unit obtains the level indicating the specific performance of the volume of the other storage system, references the storage system characteristics of the first storage system and the other storage system corresponding to the level based on the correspondence, and compares the referenced values.

17. The first storage system according to claim 16, wherein based on the result of the comparison, the data is stored into a volume having the storage system characteristics corresponding to the level indicating the specific performance of the volume of the first storage system.

18. A storage medium storing a program that can be read by a computer managing volumes of a plurality of storage systems, and is executed by a management computer connected via a network to the plurality of storage systems having volumes that are connected to a computer and to the plurality of storage systems and store data used by the computer, the storage medium comprising:

a sequence of obtaining correspondences between levels indicating a specific performance of volume, and storage system characteristics of the storage system;

a sequence of obtaining from a first storage system a level indicating a performance of a volume allocated to the computer by the first storage system; and

referencing the storage system characteristics of the first

storage system corresponding to the obtained level indicating the performance of the volume, and storage system characteristics of another storage system, and comparing the performances of the volumes of the respective storage systems against each other.

19. The storage medium according to claim 18, further comprising a sequence of giving an instruction to the other storage system based on the results of the comparison, to allocate to the computer a volume of the other storage system having storage system characteristics corresponding to the obtained level.

20. A computer system comprising a plurality of storage systems having volume storing data used by a host computer, and a management computer connected to the storage systems via a network,

wherein the management computer comprises:

a CPU for performing processing based on information received from the storage systems; and

a management network interface for sending requests to the storage systems and receiving responses from the storage systems, and

each storage system comprises:

a memory for a correspondence between a level indicating a specific performance of the volume and a value of the performance of the storage system; and a level indicating a performance of the volume of the storage system;

a volume allocation unit for referencing the correspondence

and allocating to the host computer a volume having the performance value corresponding to the level indicating the specific performance requested by the management computer ; and

a network interface for sending and receiving data to and from the management computer ,

wherein, when the CPU of the management computer detects a storage system connected to the network interface which is connected via the network to the management network interface, the CPU obtains the correspondence from the storage system, obtains the level indicating the performance of the volume which the CPU already allocated to the host computer, references the correspondences of the plurality of storage systems, compares the storage system characteristics of the plurality of storage systems corresponding to the level, and based on the result of the comparison, gives an instruction to a different storage system from the storage system having the volume that is already allocated to the host computer, to allocate a volume corresponding to the level; and

the storage system volume allocation unit allocates to the host computer a volume having the performance corresponding to the level based on the allocation instruction.